Role of wearable activity-tracking technologies in the well-being and quality of life of people aged 55 and over

Conference or Workshop Item

Role of wearable activity-tracking technologies in the well-being and quality of life people aged 55 and over

Shailey Minocha

Research Team: Duncan Banks, Caroline Holland, Catherine McNulty and Jane Palmer

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Technology and Education

Multi-user 3D environment:

Avatar-based virtual Geology fieldtrip

Skiddaw mountains

Funding: Wolfson Trust

Virtual Reality: phone-driven

Google Expeditions

Geography and Science education in schools

Funding: Google

Technology and Ageing

Themes:

social isolation and loneliness

online social interactions

digital skills for employability and lifelong learning

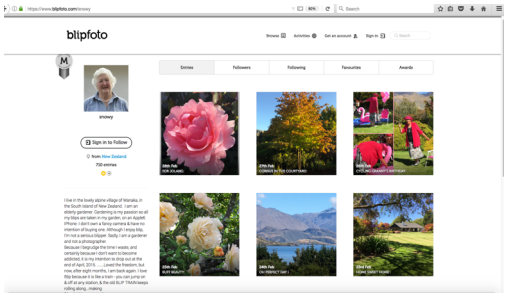
Case study of an online community:

photography journal: blipfoto.com

inter-generational communication

support for carers

digital curation



Participation

Methods:

meetings

workshops

email and face-to-face conversations; diary studies

surveys

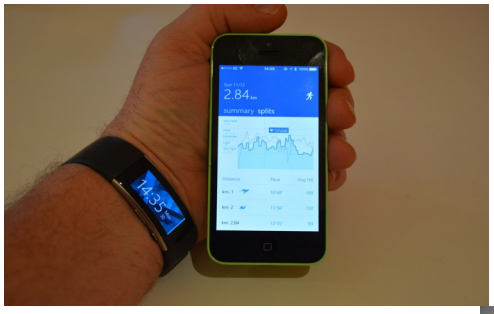
Collaborators:

Age UK Milton Keynes, Carers MK, MK U3A

Mind, Dementia Friends

MK Council, West Bletchley Council

Digital health wearables



Fitness trackers:

walking, sleep patterns, calories expended, …

dashboard on phone or Tablet

Funding: Sir Halley Stewart Trust

Significance:

Active and Healthy Ageing

physical activity to preserve mobility and motor skills

Digital NHS

self-monitoring of health and medical conditions

Research

Participants:

people aged 55 and over who are already using such devices

people aged 55 and over who haven't used such devices

Other stakeholders:

carers and family members

family doctors and healthcare professionals

Data collection

Trying out the devices:

behaviour change study

activity-trackers to 21 participants in age-range 55-82

email interviews and diaries

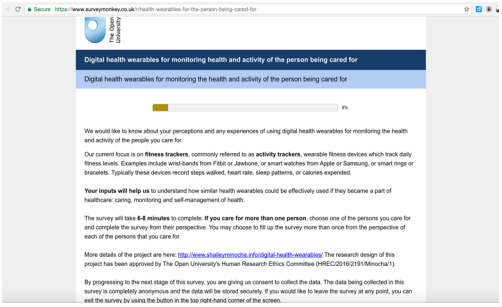
4 workshops over 6 months

Surveys:

age 55 and over who use these devices

carers; and a workshop

doctors and healthcare professionals


Digital health wearables for monitoring health and activity of the person being cared for

Digital health wearables for monitoring health and activity of the person being cared for

Results

Concerns:

design of the devices

usability and accessibility of devices

technical support

online help and tutorials

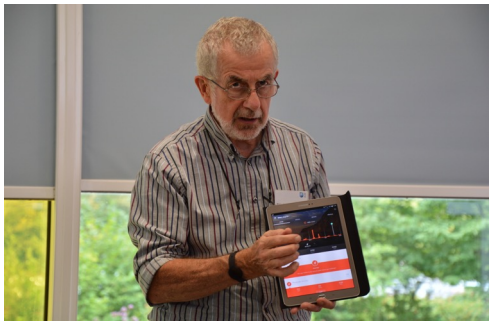
Data handling:

recording of the data

making sense of the data

accuracy of the data

ethics of sharing the data



Behaviour change

Lifestyle changes:

diet, walking, conscious use of the car, joining the gym, walking groups, monitoring sleep

Other changes:

diagnosis and solutions for non-optimal sleep

pacing themselves with adequate rest-times

awareness of ethical sharing and use of data

Carers

For themselves:

monitoring their own health and activity

sleep patterns

level of activity

For people they care for:

'to monitor health in a low-key way that is not intrusive and give them independence to cope when they are doing well'

this data may '*create confusion and unnecessary worry*'

Key findings

- challenges for adoption of these technologies
- design for age-related impairments (e.g. vision, hearing, memory, dexterity)
- positive behavioural changes
- the role of digital health wearables in
  - caring, self-management of health
  - post-operative monitoring of mobility
  - for monitoring movement: dementia and Alzheimer's disease
  - use of the data for diagnosis and medical interventions

Next steps

- dissemination of the results
- two-way knowledge-exchange with key stakeholders including manufacturers
- develop a shared understanding of design requirements
- to build on and enhance the evidence-base on the role of wearable devices in digital health
- guidelines on ethical considerations of sharing and using data from wearable devices

Resources

- Technology and Ageing themes: http://www.shaileyminocha.info/people-aged-over-55-years/
- Reports and presentations available from: http://oro.open.ac.uk/view/person/sm577.html
- Email: shailey.minocha@open.ac.uk
- Twitter: @ShaileyMinocha
- Thanks to *Dr. Duncan Banks, The Open University* for the photographs used in describing the digital health wearables project